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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,836	01/30/2004	Masanori Yabu	0229-0794P	4581

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EXAMINER

HUNTER, ALVIN A

ART UNIT	PAPER NUMBER
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3711

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/766,836

Applicant(s)

YABU, MASANORI

Examiner

Alvin A. Hunter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/30/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because the abstract is longer than 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yabu (JP 2003-159354).

Regarding claim 1, Yabu discloses a hollow metal club head comprising a face portion whose front surface defines a club face for hitting a ball, and a turnback wall extending backward from a circumferential edge of the face portion, wherein the head volume is in a range of 200 to 500, a height of the club face is in a range of 30 to 85mm, a surface area of the club face is in a range of 25 to 75 sq. cm or 2500 to 7500 sq. mm, an in a front end zone of the turnback wall and a peripheral zone of the face portion which are adjacent to each other through a junction between the turnback wall and the face portion (See Paragraphs 0045 and 0046). Though Yabu does not limit the material that can be used for the face portion (See Paragraph 0017), it is submitted that Yabu

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inherently meets the ratio of zone rigidity of the peripheral zone to the zone rigidity of the front end zone for the following:

a) because one having skill in the art would have drawn from Yabu that both the head body and the face portion are made of titanium alloy base on the examples.

Because the material is the same, the Young's modulus is the same,

b) the front end zone has a thickness of 0.3 to 0.7mm less than the thickness of the central face portion wherein the central face portion is 2.5 to 3.5mm and the crown and sole portions have a thickness of 0.8 to 1.2mm.

Since the Young's modulus is the same, the ratio can be determined from the thicknesses of the above components (t_f/t_h), which would equate to a ratio from about 11. Though the ratio anticipates the applicant's ratio at particular values, one having ordinary skill in the art would have found it obvious for the ratio to be of any value so long at the club head provides improved hitting sound.

Regarding claim 2, Yabu inherently discloses the primary frequency claimed by the applicant due to the reasoning set forth in claim 1.

Regarding claim 3, Yabu shows the peripheral zone extending continuously along the circumferential edge of the club face (See Figure 5).

Regarding claim 4, Yabu inherently shows the front end zone (Y) extending across at least a range having a width corresponding to a height of the clubface and centered on the centroid of the club face (See Figures 4 and 5).

Regarding claims 5 and 6, Yabu discloses the peripheral zone (GW) extending between 3 to 5mm from the circumferential edge towards the centroid of the club face

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and the front end zone (Y) extending 5mm backward from the circumferential edge of the club face (See Paragraph 0028, 0043 and Figures 4 and 5).

Regarding claim 7, Yabu discloses the Young's modulus in the peripheral zone being the same as that in the front end zone due to the reasoning set forth in claim 1.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yabu (JP 2003-159354) in view of Suzuki (JP 2000-144286).

Regarding claim 8, Yabu does not disclose the Young's modulus of the peripheral zone being smaller than that of the front zone. Suzuki et al. discloses a titanium alloy in which can be used for enlarging the volume of a club head wherein the titanium alloy contains 4 to 10% chromium, 10 to 24% vanadium, 2 to 6% aluminum (See Abstract, Field of the Invention, and Object of the Invention). Based on the above material content, it is submitted that the combination of Yabu and Suzuki et al. would meet the claimed limitation because Suzuki et al. inherently has a smaller Young's modulus than that of the body of Yabu base on the component percentages of the titanium. One having ordinary skill in the art would have found it obvious to have the face portion of the club head made of the above material in order to enable enlargement of the club head.

Regarding claim 9, claim 1 sets forth the thickness of the front end zone and the peripheral zone. The Young's modulus is inherently met by Yabu in view of Suzuki et al. due the reasoning set forth in claim 9, in addition to the type of materials set forth in in Yabu and Suzuki et al.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is (571) 272-4411. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Vidovich, can be reached on 571-272-4411. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alvin A. Hunter, Jr.



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